



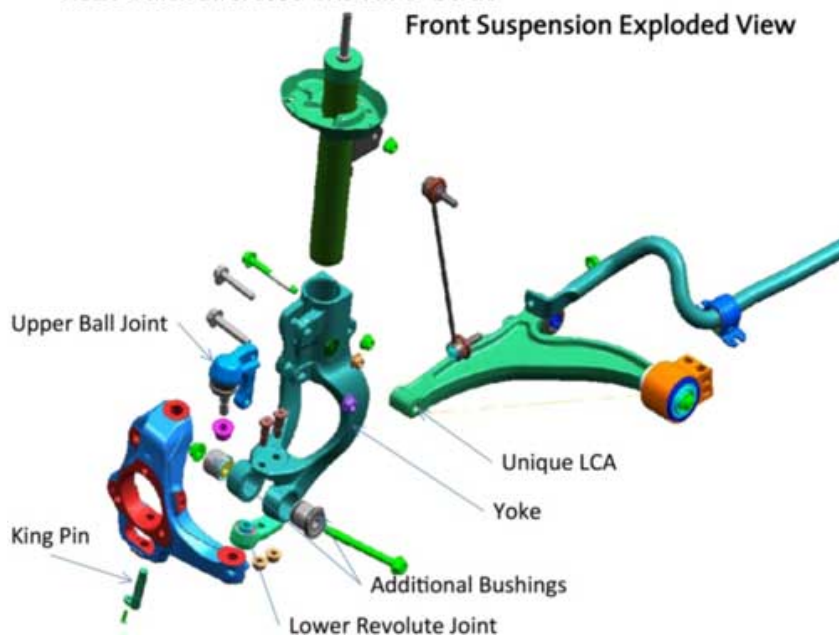
GM HiPer Strut and Torque-to-Yield Bolts

Q1: What is the General Motors HiPer-Strut?

A1: Derived from “High Performance Strut, the HiPer Strut suspension is partnered with conventional dampers when used with the standard 18-inch wheels and an advanced electronically controlled damping system with the available 19-inch wheels. According to the manufacturer, the benefits of the HiPer-Strut are:

- Reduced torque steer.
- Reduced vehicle sensitivity to tire irregularities and wheel imbalance.
- Increased linear and communicative steering through improved camber control.
- Improved impact isolation on bumps and rough surfaces.

2010 Buick LaCrosse CXS HiPer Strut



Q2: The General Motors HiPer-Strut has a Torque-to Yield bolt retaining the strut to the knuckle. Can I reuse this bolt or do I need to replace it?

A2: The bolt needs to be replaced if it is loosened to adjust camber. To tighten a GM replacement bolt, the procedure would be to initially tighten the bolt to a specific torque and then turn the nut another 45 to 90 degrees of rotation. (See manufacturer service manual for proper procedure!)



Q3: What does Torque-to-Yield mean?

A3: Torque-to-Yield or TTY fasteners have been use for quite some time on engine head bolts and crankshaft rod bolts. They are gaining popularity in suspension usage because of their unique characteristics. Basically a smaller diameter or lower grade bolt can be used to achieve the same clamping force of a larger bolt. The TTY bolt stretches more than a standard bolt to maintain a specific clamping force and therefore should be replaced if removed or loosened.

Q4: Are there any aftermarket options available to replace the OE torque-to-yield fastener?

A4:

Yes, SPC will be launching a series of 12.9 grade bolts very shortly to be used in place of the 10.9 grade TTY bolts that GM offers. SPC's bolts will be reusable as they are not TTY and will achieve required clamp load with the higher grade bolt.

